

ABSTRACT OF THE DISCLOSURE

Small spheres, commonly referred to as proppants, are manufactured from sol-gel ceramics, preferably aluminosilicates or phosphates, and include chemical composites termed geopolymers. In the preferred manufacturing process, the required chemical components are blended, and the proppant particles are shaped and cured at low temperatures. The proppant particles have high compressive strength, are chemically inert, and a low specific gravity, making them particularly suited for hydraulic fracturing.